24-1-25/26

New methods of investigation of the processes of disruption of rocks by mechanical methods.

cutting of rocks and Chumak, All-Union Research Institute for the Organisation and Mechanisation of Mine Construction VNIIOMShS (Vsesoyuznyy Nauchno-Issledovatel'skiy Institut Organizatsii i Mekhanizatsii Shakhtnogo Stroitel'stva VNIIOMShS),described a test stand for investigating vibro-impact drilling.   In the resolutions it was mentioned that, in spite of known achievements in the field of developing experimental methods and techniques for studying processes of disruption of rocks, utilisation of the latest achievements in physics is lagging. For instance, radio-active isotopes, semi-conducting instruments etc. are not being used on an adequate scale. It was also pointed out that most institutes were forced to design and build   strain gauge apparatus and a number of metering instruments on a very small scale and evidently it will be necessary to organise

Card 5/5   centralised manufacture of such apparatus.

(Note: This is an almost complete translation).

AVAILABLE: Library of Congress.

IVANCHENKO, Ye.Ya.; VOLKOV, A.A.

Induction, torsion-type dynamometer for the investigation of rock
boring and the performance of electric drills. Sbor.nauch.trud.
KHGI 5:15-25 '58.   (MIRA 14:4)
              (Rock drills) (Dynamometer)

VOLKOV, A.A., dotsent; MIKHAYLOV, V.A., dotsent

Design of an electrical network for regulating the liquid level.
Izv. vys. ucheb. zav.; gor. zhur. no.5:165-172 '61.
(MIRA 16:7)

1. Khar'kovskiy gornyy institut. Rekomendovana kafedroy avto-
matizatsii gornopromyshlennykh predpriyatiy.
(Liquid level indicators)
(Ore dressing--Equipment and supplies)

VOLKOV, A.A., dotsent

Dynamics of the operation of a bit in a working face in rotary drilling. Izv. vys. ucheb. zav.; gor. zhur. 6 no.4:79-88 '63.
(MIRA 16:7)

1. Khar'kovskiy institut gornogo mashinostroyeniya, avtomatiki i vychislitel'noy tekhniki. Rekomendovana kafedroy avtomatizatsii proizvodstvennykh protsessov.
(Boring)

ACCESSION NR: AT4008774   S/3054/63/000/000/0342/0353

AUTHORS: Volkov, A. A. (Candidate of technical sciences)

TITLE: Digital computers used for controlling systems with optimal characteristics

SOURCE: Pribory* promy*shlennogo kontrolya i sredstva avtomatiki. Doklady* i soobshcheniya.   Kiev, 1963, 342-353

TOPIC TAGS: optimalizing control system, digital computer, self adjusting control system, sampling controller, programmed control, extremum seeking control system, logic circuit

ABSTRACT: Following an enumeration of the requirements that must be satisfied by a computer designed to control objects with optimal characteristics and with high and low inertia, the author describes an operations program and block diagrams for such computers, developed at the Khar'kovskiy institut gornogo mashinostroyeniya, avtomatiki

Card   1/4

ACCESSION NR: AT4008774

i vy*chislitel'noy tekhniki (Khar'kov Institute of Mining Machine Building, Automation, and Computation Techniques). Block diagrams for the required logical elements and binary counters are also represented. "N. N. Maksyutenko and A. I. Logachev participated in the development and production of the apparatus." Orig. art. has: 4 figures and 16 formulas.

ASSOCIATION: Khar'kovskiy institut gornogo mashinostroyeniya, avtomatiki i vy*chislitel'noy tekhniki (Khar'kov Institute of Mining, Machine Building, Automation, and Computation Techniques)

SUBMITTED: 00   DATE ACQ: 25Jan64   ENCL: 02

SUB CODE: CG   NO REF SOV: 003   OTHER: 000

Card 2/₺ʔ

SVIRIDENKO, S.Kh.; AKHMECHET, L.S.; VOLKOV, A.A.; MEYSTEL', A.M.;
    MIZHEVSKIY, L.L.; POLYAKOV, L.M.; RASHKOVICH, M.P.;
    SRIBNER, L.A.; KHVALOV, Yu.G.; SHPIGLER, L.A.; SERAGO,
    L.K.; ORLIKOV, M.L., inzh., retsenzent; SVECHNIKOV, L.V.,
    inzh., retsenzent; MATSIYEVSKIY, A.G., inzh., red.

[Elements of the automation of machine tools] Elementy
avtomatizatsii metallorezhushchikh stankov. Moskva, Mash-
giz, 1964. 210 p.   (MIRA 17:12)

DOROKHOV, Aleksandr Petrovich; KOROBKINA, Galina Stepanovna;
STARODUBTSEV, Viktor Aleksandrovich; TSARENKO, Vladimir
Timofeyevich; VOLKOV, A.A., retsenzent; OGORODNEYCHUK,
I.F., retsenzent; RUDENKO, V.S., retsenzent; TETEL'BAUM,
Ya.I., retsenzent; FILONENKO, S.N., dots., otv. red.;
NESTERENKO, A.S., red.

[Principles of industrial electronics] Osnovy promyshlennoi
elektroniki. [By] A.P.Dorokhov i dr. Khar'kov, Izd-vo
Khar'kovskogo univ., 1964. 214 p.   (MIRA 17:8)

VOLKOV, A.A., kand. tekhn. nauk; YEFIMOV, A.N., inzh.; RYBNIKOV, E.N., inzh.

Studying the correction of the dynamic properties of mine
excavating machines by mathematical modeling. Izv. vys. ucheb.
zav.; gor. zhur. 8 no.7:174-179 '65.   (MIRA 18:9)

1. Khar'kovskiy institut gornogo mashinostroyeniya, avtomatiki i
vychislitel'noy tekhniki. Rekomendovana kafedroy tekhnicheskoy
kibernetiki.

VOLKOV, A.A., kand. tekhn. nauk; YEVDOKIMOV, A.G., inzh.

Mathematical description of steady air distribution processes in mine ventilation systems. Izv. vys. ucheb. zav.; gor. zhur. 8 no..:136-143 '65.   (MIRA 18:5)

1. Khar'kovskiy institut gornogo mashinostroyeniya, avtomatiki i vychislitel'noy tekhniki.
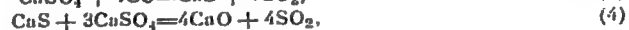
5.4300,5.4700

AUTHORS: Ginstling, A. M., Volkov, A. D.

TITLE: Investigation of the Thermochemical Decomposition of
               Calcium Sulfate and of Its Reaction With Carbon

PERIODICAL: Zhurnal prikladnoy khimii, 1959, Vol 32, Nr 10, pp
               2171-2177 (USSR)

ABSTRACT: This is a study of the thermodynamics and kinetics of
               the above processes. The isobaric-isothermal Gibbs free
               energies ΔZ_T^0 plotted vs temperature in Fig. 1 were
               determined for reactions (1) to (7).

$$CaSO_4 + 2C = CaS + 2CO_2, \qquad (1)$$
$$CaSO_4 + 4C = CaS + 4CO, \qquad (2)$$
$$CaSO_4 + 4CO = CaS + 4CO_2, \qquad (3)$$
$$CaS + 3CaSO_4 = 4CaO + 4SO_2, \qquad (4)$$
$$3CaS + CaSO_4 = 4CaO + 2S_2, \qquad (5)$$
$$2CaS + SO_2 = 2CaO + 1.5S_2, \qquad (6)$$
$$CaS + 2SO_2 = CaSO_4 + S_2. \qquad (7)$$

Card 1/6

Investigation of the Thermochemical
Decomposition of Calcium Sulfate and
of Its Reaction With Carbon

75658
SOV/80-32-10-7/51
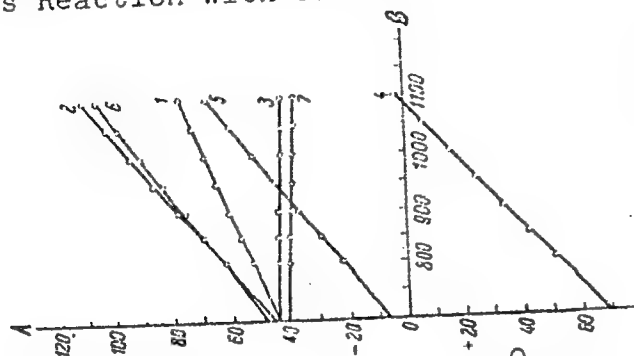

Fig. 1. Change in the
isobaric-isothermal Gibbs free
energies of the main reactions
in the $CaSO_4$ + C system with
temperature. (A) ΔZ_T^0
(kcal/mol); (B) temperature ($^\circ$C)

Comparison of ΔZ_T^0 for (5), (6), and (7) indicates the
greatest probability of (6), but since (6) and (7)
both require SO_2, (5) is possible in the absence or
insufficiency of SO_2. At higher temperatures (4) is
driven to the right, which favors (6). The kinetics
of the reaction of $CaSO_4$ with C were studied on the

Card 2/6

Investigation of the Thermochemical
Decomposition of Calcium Sulfate and
of Its Reaction With Carbon

75658
SOV/80-32-10-7/51

basis of experimental composition data for the solid
and gaseous reaction products. Reagents: $CaSO_4$ prepared
by heating analytical grade gypsum, and natural gyp-
sum containing 0.2% R_2O_3 and traces of MgO; sugar char-
coal, all in powder form; molar $CaSO_4/C$ ratio, 1/0.6.

Experimental conditions: reagents heated in a stream
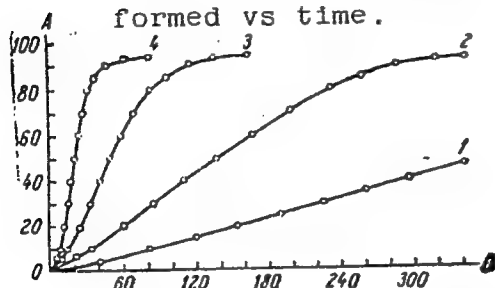of purified nitrogen. Figure 3 shows the amount of SO_2
formed vs time.

Fig. 3. Kinetics of SO_2 evol-
ution on decomposition of anal-
ytically pure $CaSO_4$. (A) SO_2 con-
tent (% of starting S); (B)
time (min). Temperature (°C):
(1) 950, (2) 1,000, (3) 1,050,
(4) 1,100.

Card 3/6

Investigation of the Thermochemical
Decomposition of Calcium Sulfate and
of Its Reaction With Carbon

75658
SOV/80-32-10-7/51

Figures 4 and 5 indicate changes in the solid-product
composition with time: the negligible SO_3 formation
and large $CaSO_4$ consumption at the start are proof of
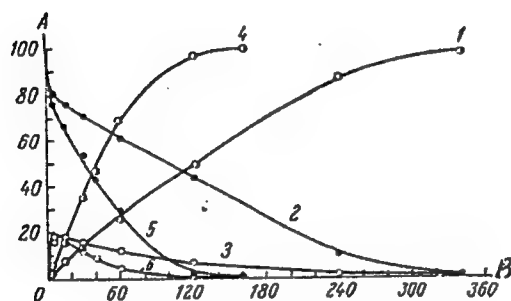the high rate of $CaSO_4$ reduction to CaS.

Fig. 4. Kinetics of the com-
position change of the solid
product in the process of de-
composition of analytically
pure $CaSO_4$. (A) Content cal-
culated as $CaSO_4$ (%); (B)
time (min): at 1,000°: (1)
CaO, (2) $CaSO_4$, (3) CaS; at
1,050°: (4) CaO, (5) $CaSO_4$,
(6) CaS.

Card 4/6

Investigation of the Thermochemical
Decomposition of Calcium Sulfate and
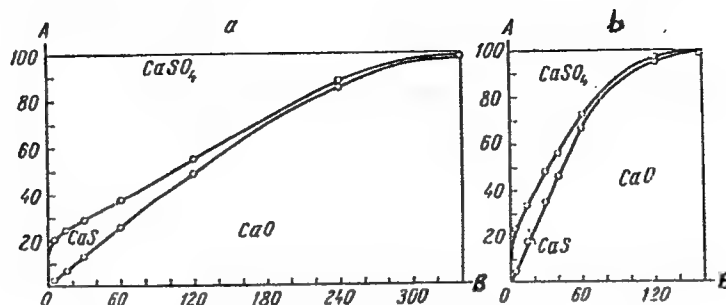of Its Reaction With Carbon

75658
SOV/80-32-10-7/51

Fig. 5. Material balance diagram of the composition
change of the solid product in the process of analy-
tically pure $CaSO_4$ decomposition. (A) content calcu-
lated as $CaSO_4$ (%); (B) time (min); (a) at 1,000°,
(b) at 1,050°.

Card 5/6

Investigation of the Thermochemical
Decomposition of Calcium Sulfate and
of Its Reaction With Carbon

75658
SOV/80-32-10-7/51

Calculations prove that the maximum amount of CaS_2

formed (curves 3 and 6 on Fig. 4) is insufficient
to react according to (4) with the remaining $CaSO_4$.

whose reduction therefore continues. There are 3
tables; 5 figures; and 17 references, 12 Soviet, 3
Polish, 1 German, 1 U.S. The U.S. reference is:
Rossini, F. D., Wagman, D. D., Evans, W. H., Levine,
S., Ioffe, I., Selected Values of Chemical Thermody-
namic Properties, Nat. Bur. Stand. Circ. 500 (1952).

SUBMITTED: December 8, 1958

Card 6/6

SHALASHOV, V.A.; FINKEL'SHTEYN, T.B., starshiy nauchnyy sotrudnik;
VOLKOV, A.D.

Self-lubricating rings of spinning machines made from metallic
ceramics. Tekst. prom. 25 no.7:63-67 Jl '65.   (MIRA 18:8)

1. Direktor Vsesoyuznogo nauchno-issledovatel'skogo instituta
legkogo i tekstil'nogo mashinostroyeniya, Moskva (for Shalashov).
2. Vsesoyuznyy nauchno-issledovatel'skiy institut legkogo i
tekstil'nogo mashinostroyeniya, Moskva (for Finkel'shteyn).
3. Nachal'nik laboratorii tekhnologii mashinostroyeniya Vsesoyuz-
nogo nauchno-issledovatel'skogo instituta legkogo i tekstil'nogo
mashinostroyeniya, Moskva (for Volkov).

S/194/62/000/002/03?/036
D230/D301

AUTHOR: Volkov, A. D.

TITLE: Polarity-selective relay distributor for remote-con-
               trol and remote signalling

PERIODICAL: Referativnyy zhurnal, Avtomatika i radioelektronika,
               no. 2, 1962, abstract 2-2-133shch (Ugol', 1961, no. 9,
               28-30)

TEXT: Description of a simple relay distributor with polarity-se-
lective element designed for the remote control of blowers for the
main ventilation of mines. Remote and supervisory controls from the
dispatch point can be achieved by means of a relay distributor us-
ing two pairs of conductors. The distributor consists in the main,
of a relay type $P\Lambda T-10$ (RPT-10) or $MKY-42$ (MKU-48) and selenium rec-
tifiers mounted on two panels: the point-dispatch panel and the
control panel. The connection between the panels is made by four
conductors, or by a four-way cable. The distributor replaces a 20-
way control cable. /¯Abstracter's note: Complete translation._7

Card 1/1

VOLKOV, A.D.

Relay type distributor with polar selection for remote control and long distance signaling systems. Ugol' 36 no.9:28-30 S '61.
(MIRA 14:9)

1. Glavnyy inzhener Gorlovskogo spetsmontazhnogo upravleniya Ugleavtomatika.
(Coal mining machinery) (Remote control)

5.1190, 5.4300, 5.4700

77628
SOV/80-33-2-3/52

AUTHORS: Ginstling, A. M., Volkov, A. D.

TITLE: Reaction of Calcium Sulfate With Carbon in the Presence of Sodium Chloride

PERIODICAL: Zhurnal prikladnoy khimii, 1960, Vol 33, Nr 2, pp 274-279 (USSR)

ABSTRACT: This is the second article in a series concerning thermal decomposition of calcium sulfate. The article deals with the effect of sodium chloride addition on decomposition of calcium sulfate. Experiments were conducted at 1,000 and 1,050° in a stream of nitrogen. The results are given in Table A. The reaction proceeds in 2 stages: (1) reduction of sulfate by carbon to yield sulfide; (2) reaction of the sulfide with sulfate. Under the investigated conditions, the second stage is the slower of the two, and it limits the process rate.

Card 1/3

Reaction of Calcium Sulfate With Carbon   77628
in the Presence of Sodium Chloride   SOV/80-33-2-3/52

It was found that NaCl has a retarding effect on
the first stage, but at the given temperature the
addition of 0.5-1% NaCl increases the process rate
of the second (limiting) stage, which correspondingly
increases the overall process rate. The effectiveness
of the accelerating admixture decreases with the
increase in process temperature. There are 6 figures;
1 table; and 12 references, 11 Soviet, 1 Czechoslovakian.

SUBMITTED: July 11, 1959

Card 2/3

Reaction of Calcium Sulfate With Carbon
in the Presence of Sodium Chloride

77628
SOV/80-33-2/3/52

Table A. Effect of NaCl on kinetics of SO_2 evolution
during decomposition of $CaSO_4$ (c.p.) at 1,000 and
1,050° C (A) Yield of SO_2 (% of stoichiometric);
(B) $CaSO_4$ decomposition time (min, sec) for NaCl
content in mixture.   (B)

(A)	0%	0.5%	1%	2%	0%	0.5%	1%	2%
	1000°				1050°			
2.32 *	10, 49	6, 25	6, 00	5, 57	4, 08	2, 45	2, 32	2, 37
10.85	33, 34	20, 24	19, 36	19, 57	14, 12	9, 22	8, 15	8, 27
20.18	57, 15	34, 00	30, 45	33, 44	22, 35	14, 15	12, 37	12, 52
31.03	83, 32	52, 27	43, 05	51, 32	32, 10	19, 54	16, 56	17, 17
41.84	102, 45	76, 00	58, 43	70, 50	40, 42	25, 00	20, 57	21, 35
49.62	129, 20	95, 48	68, 15	84, 56	47, 50	28, 23	24, 00	24, 52
62.00	163, 32	135, 20	87, 57	112, 48	58, 00	34, 40	29, 42	30, 48
81.45	235, 20	225, 37	121, 28	175, 34	83, 12	55, 38	49, 32	53, 58
89.12	276, 22	276, 24	141, 22	216, 25	106, 00	73, 43	66, 50	79, 45
92.22	300, 10	300, 18	160, 00	242, 05	130, 45	90, 03	82, 56	102, 20
93.77	328, 00	328, 25	174, 12	252, 28	160, 00	101, 00	100, 06	130, 00
94.52	340, 00	340, 45	178, 04	265, 52	—	—	—	—
94.72	—	—	182, 00	280, 00	—	—	—	—

Card 3/3   * For brevity, only part of experimental data is given.

5.2100

AUTHORS: Ginstling, A. M., Volker, A. D.

TITLE: Brief Communications. Reaction of Calcium Sulfate With
             Carbon and Silica

PERIODICAL: Zhurnal prikladnoy khimii. 1960, Vol 33, Nr 3,
             pp 736-739 (USSR,

ABSTRACT: This is Communication III on the thermochemical
             decomposition of calcium sulfate. The effect of
             calcium fluoride as an accelerator of the thermal
             decomposition of a mixture of anhydrite, coal, and
             silica was investigated. It was established that the
             addition of 1% CaF_2 to the above mixture increased

             9-fold the amount of CaO tied up as silicates in 90
             min. V. P. Ivanova took part in the experiments,
             which were conducted in the laboratory of the All-Union
             Geological Institute (VSEGEI). There are 2 figures;
             1 table; and 11 references 1 U.S., 1 Swiss, 1 Swedish,
Card 1/2   1 Polish, 7 Soviet. The U.S. reference is: A. Newman,

Brief Communications.   Reaction of Calcium
Sulfate With Carbon and Silica

             J. Res. Nat. Bur. Stand., 27 RP 1917 1941.

SUBMITTED: October 2, 1959

Card 2/2

VOLKOV, A. D.

Cand Tech Sci - (diss) "Study of the decompsotion of calcium
sulfate in the presence of carbon with the purpose of production
of sulfur dioxide." Leningrad, 1961. 15 pp; (Ministry of Higher
and Secondary Specialist Education RSFSR, Leningrad Order of
Labor Red Banner Technology Inst imeni Lensovet); 180 copies;
price not given; (KL, 7-61 sup, 233)

VOLKOV, A.D., kand.tekhn.nauk; DENISOV, A.P., kand.tekhn.nauk

Improve the quality of printed matter on safety engineering and
labor protection. Zhel. dor. transp. 43 no. 1:94-95 Ja '61.
                                                    (MIRA 14:4)
                (Safety education, Industrial)

GINSTLING, A.M.; VOLKOV, A.D.

Reactions involving the formation of elemental sulfur in reactions between calcium sulfate and carbon. Zhur. prikl. khim. 33 no.8:1700-1704 Ag '60.
(MIRA 13:9)
(Sulfur)   (Calcium sulfate)   (Carbon)

GINSTLING, A.M.; VOLKOV, A.D.

Interaction between calcium sulfate and carbon in the presence
of sodium chloride. Zhur.prikl.khim. 33 no.2:274-279
F '60.   (MIRA 13:5)
        (Calcium sulfate) (Carbon) (Sodium chloride)

GINSTLING, A.M.; VOLKOV, A.D.

Reaction of calcium sulfate with carbon and silica. Zhur.prikl. khim. 33 no.3:736-739 Mr '60. (MIRA 13:6)
(Calcium sulfate) (Carbon) (Silica)

Volkov, A.D.

Synthesis of ketones by the action of organomagnesium compounds on sodium salts of carboxylic acids. N. M. Grad and A. D. Volkov. *J. Gen. Chem. U.S.S.R.* 25, 1671-2(1955)(Engl. translation).—See *C.A.* 50, 5563d.
R. M. R.

GRAD, N.M.; VOLKOV, A.D.

> Synthesis of ketones by the reaction of magnesium organic compounds
> with sodium salts of carboxylic acids. Zhur.ob.khim. 25 no.9:1716-
> 1718 S '55.   (MLRA 9:2)
>
> 1.Leningradskiy tekhnologicheskiy institut imeni V.M.Molotova.
>   (Ketones) (Magnesium organic compounds)

AUTHOR: Volkov, A.D.   121-2-12/20

TITLE: The continuous relieving of multi-start hobbing cutters.
           (Nepreryvnoya aztylovaniye mnovozakhodnykh chervyachnykh
           frez)

PERIODICAL: "Stanki i Instrument" (Machine Tools and Tools), 1957,
           No.2, pp. 35 - 37 (U.S.S.R.)

ABSTRACT: A set-up is shown by which a relieving lathe can be
           arranged to perform automatically the division from one
           start to the next in a multi-start hobbing cutter where such
           division by hand is a time consuming operation and a source
           of pitch error. The geometric condition for the method is
           the disposition of profile points of the same order in all
           the starts on a common helical line. This condition is ful-
           filled when the ratio of the number of helical slots to the
           number of starts is odd. On this basis a table is constructed
           to select the number of teeth in the hobbing cutter.

           There are 2 figures and 2 tables.

AVAILABLE:
1/1

/OLKOV. A·D

VOLKOV, A.D.; LYUKSHIN, V.S.

    Designing profiles for convolute worm gears. Stan. i instr. 28 no.10:
    23-25 0 '57.   (MLRA 10:11)
                          (Gearing, Worm)

VOLKOV, A.D.

VOLKOV, A.D.

Sharpening cutters having wide angles of shear in grooves.
Stan. i instr. 28 no.12:25-26 D '57.   (MIRA 10:12)
(Cutting tools)

VOLKOV, Anatoliy Dmitriyevich; GRIGOR'YEV, Georgiy Pavlovich;
    BRODOTSKIY, A.I., red.; MIKHEYEVA, L.N., red.izd-va;
    KARLOVA, G.L., tekhn. red.

    [Physical properties of spent liquors from woodpulp
    manufacture] Fizicheskie svoistva shchelokov tselluloz-
    nogo proizvodstva. Moskva, Goslesbumizdat, 1963. 98 p.
                                          (MIRA 17:3)

BARZAKOVSKIY, V. P., doktor khimicheskikh nauk; VOLKOV, A. D., kand.
      tekhn. nauk

      Advances in the area of reactions in crystalline bodies.
      Zhur. VKHO 8 no.2:128-134 '63.   (MIRA 16:4)

            (Crystallography)   (Chemical reactions)

S/063/63/008/002/002/015
A057/A126

AUTHORS: Barzakovskiy, V.P., Doctor of Chemical Sciences, Volkov, A.D., Can-
             didate of Technical Sciences

TITLE: News in the field of the reactions in crystalline substances

PERIODICAL: Zhurnal vsesoyuznogo khimicheskogo obshchestva imeni D.I. Mendele-
             yeva, v. 8, no. 2, 1963, 128 - 134

TEXT: The authors give a review of papers upon the reaction in crystal-
line substances, read on the Fourth International Symposium on the Reactivity of
Solids, Amsterdam, May 30 to June 14, 1960. A short discussion of each problem
is given. There is 1 table.

Card 1/1

Volkov, A. E.

/Gas purification from hydrogen sulfide by oxidation on activated carbon. Ya. D. Zel'venskit and A. E. Volkov. Trudy Gosudarst. Nauch-Issledovatel i Proekt. Inst. Azot. Prom. 1952, No. 1, 131-8(Pub. 1953); Referat. Zhur., Khim. 1955, Abstr. No. 57399.—The purification of a N-H mixt. obtained by decompg. NH₃ contg. 0.5-1.0% O₂, 0.2 mg./cu. m. NH₃, and certain amt. of H₂S is studied. An effective type of activated carbon (AC) is selected. It is established that: increasing the gas velocity does not affect the max. amt. of absorbed S in relation to AC; raising the temp. from 20° to 50° does not affect the absorption of the AC, which is most efficient when the gas has relative humidity ∼ 100%. Best results are obtained with AC grain size 1-2 mm.; the used AC is completely regenerated by (NH₄)₂S soln.; org. mixts. in the gas (vapors of naphthalene or benzene) poison the AC; presence of 20% CO₂ in the gas does not affect the absorption ability of AC; the oxidation product of H₂S is S deposited on the AC and extd. from it during the regeneration; the yield of S reaches 98% of its content in the gas. N. Vasileff

KAK BADZE, V.M.; CHKHUBIANISHVILI, M.G.; VOLKOV, A.D.

Preparation of sulfur dioxide by the thermal decomposition
of natural calcium sulfate. Trudy Inst. prikl. khim. i
elektrokhim. AN Gruz. SSR 4:121-129 '63.   (MIRA 17:5)

VOLKOV A.E.

VOLKOV, A.F

32-8-45/61

AUTHOR   GOKHSHTEYN, Ya. P.,   KUZMIN S.V.,
           VOLKOV A.F.,   YANCHEVSKIY V.Ya.

TITLE   Oscillographic Polarograph "Geokhi".
           (Ostsillograficheskiy polyarograf "Geokhi".- Russian)

PERIODICAL Zavodskaya Laboratoriya 1957, Vol 23, Nr 8, pp 988-992
           (U.S.S.R.)

ABSTRACT   A new highly sensitive device for carrying out analyses is
            concerned here. The experiments of the quantitative deter-
            minations of small contents of Bi, Sb, Cd, and Pb at high
            content of uranium are given as examples. The radiotech-
            nical scheme of the apparatus is given here which shows
            that to the main part of the apparatus there belongs the
            generator scheme with two tubes, a pentode with reversed
            negative binding in the cathode; in the wiring circuit
            of the second stage there is potentiometer which regulates
            the amplitude of the saw-tooth-like oscillations which are
            then recorded by the generator by means of a capacitor.
            The next tube (3) has an oscillation limiter the treshold
            of which is regulated by an alternating resistance. The
            oscillations are received by the next tube (4) which has
            an electrolytical cell and a cathode repeater, after which
            they are transmitted to the next tube (8) with the cascade

CARD 1/2

CARD 2/2   Oscillographic Polarograph "Geokhi".   32-8-45/61

of the horizontal amplification. A potentiometer here
serves as an amplitude regulator. The electrolytical cell
is galvanically connected with the cathode repeater which
is regulated by the next alternating resistance. Thus
either a positive or a negative voltage can be obtained
here which is gauged by tube voltameters. For measuring
the amplitude of the saw-tooth-like voltage there serves
the next tube (6) which works as a voltmeter. The voltage
is furthermore transmitted by the resistance (19) of the
electrolytic cell to an amplifier with tube (7) in the
first cascade. All cascades with the exception of end-
cascades are fed with the voltage 180 V by the electron
stabilizer (tube 16, 17, 18). Tube (19) feeds an electron
beam tube (20) which has at the output from the filter the
voltage 1800 V. Moreover the apparatus has various additional
aggregates which increase its sensitivity. Examples of the
application of the apparatus and the exploitation of the
results are given gere. There are 5 figures, 2 tables,

ASSOCIATION: Institute for Geochemistry and Analytic Chemistry of the
                Academy of Sciences of the U.S.S.R.
                (Institut geokhimii i analiticheskoy khimii Akademii nauk
                SSSR)
AVAILABLE: Library of Congress.

28(4)

SOV/32-25-8-39/44

AUTHORS: Gokhshteyn, Ya. P., Volkov, A. F., Kuz'min, S. V., Yanchevskiy, V. A.

TITLE: A New Model Oscillographic Polarograph

PERIODICAL: Zavodskaya laboratoriya, 1959, Vol 25, Nr 8, pp 1008-1012 (USSR)

ABSTRACT: A new type cathode-ray polarograph was designed which makes possible the detection of low concentrations of elements and organic compounds, the determination of the capacity of the binary electrical layer on dropping and solid electrodes, the impedance of the electrolytic cell, the velocity and the reversibility of the electrode reactions and the study of surface and adsorption phenomena. The instrument operates with an accuracy of $\pm$ 2% at concentrations of $10^{-3} - 10^{-5}$ mol/l and of $\pm$ 3% at $10^{-6} - 10^{-7}$ mol/l. The scheme of the instrument permits a periodical and a unique development of the various fixed velocities of the potential variations and this way both an Hg-dropping electrode and a stationary Hg-electrode can be used and the sensitivity can be considerably increased. One

Card 1/3

A New Model Oscillographic Polarograph   SOV/32-25-8-39/44

can operate simultaneously with two cells which are reversed by a polarized relay. The polarographic cell receives simultaneously a constant negative tension and a positive sawtooth-shaped tension which eliminates the deformation of the curves by the current intensity. The radiotechnical wiring of the instrument was designed based on electron-ray tube type 13LO-36 and consists of the following main units (Fig 1): a generator for the linear-varying tension (the potential variations are determined by means of a magneto-electric loop-oscillograph N-10) with a thyratron cathode TG1-0.1/0.3, a compensator for the load resistance of the cell (with a network 12Zh1L) and a compensator of the capacity current, a synchronizer and a single vibrator (6N8) for the delay of the impulse (synchronized with the dropping period of the Hg), an amplifier for the vertical ray declination (with networks 6Zh4, 12Zh1L) and a current feeder unit. The article gives data on the sensitivity (Table) of the instrument and examples of investigations made with oscillograms obtained at the electrolysis of a 1 n KCl-solution, which contained 5.0 γ/ml of Pb^{2+} and Cd^{2+}, and a 1 n HCl-solu-

Card 2/3   tion containing 0.5 γ/ml of Sb^{3+} and Bi^{3+} and a 1 n KCl-solu-

A New Model Oscillographic Polarograph   SOV/32-25-8-39/44

        tion with 0.1 γ/ml of Cd^{2+}. There are 5 figures, 1 table, and
        1 Soviet reference.

ASSOCIATION: Institut geokhimii i analiticheskoy khimii Akademii nauk SSSR
               (Institute of Geochemistry and Analytical Chemistry of the
               Academy of Sciences, USSR)

Card 3/3

VOLKOV, A.F.

Silicon current rectifiers. Biul.tekh.-ekon.inform. no.12:51-52
'61.   (MIRA 14:12)
            (Electric current rectifiers)

VESHENEVSKIY, S.N.; SOLODUKHO, Ya.Yu.; TSALLAGOV, A.P.;
        ZAMARAYEV, B.S.; VOLKOV, A.F. (Moskva); NIKULIN, G.F.;
        LARKIN, A.P.

Exciter for electrical machines using thyristors. Elektri-
chestvo no.2:74-77 F '64.   (MIRA 17:3)

1. Gosudarstvennyy institut po proyektirovaniyu elektrooboru-
dovaniya dlya tyazheloy promyshlennosti (for Veshenevskiy,
Solodukho, TSallagov, Zamarayev). 2. Metallurgicheskiy zavod
"Serp i molot" (for Nikulin, Larkin).

L 41032-65   EWT(d)/EWT(m)/EWP(w)/T-2   EM   S/0286/65/000/006/0113/0113

ACCESSION NR: AP5008577

AUTHORS: Zuyev, M. A.; Razin, G. M.; Krylov, V. M.; Volkov, A. F.; Timoshin, Ye. P.; Sterlikov, V. P.; Gomulev, S. A.; Denasov, V. B.; Mirolyubov, G. P.

TITLE: Test stand for creating impact overloads. Class 62, No. 169407

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 6, 1965, 113

TOPIC TAGS: impact testing

ABSTRACT: This Author Certificate presents a test stand for creating impact overloads. The stand contains a truss with controlling cables, a hoisting device, a platform for the investigated object, a cable with a suspension system, a cut-off mechanism, a braking mechanism, shock absorbers, and instruments for measuring the platform drop rate. To increase the safety of the experiment and to exclude the effect of the prescribed height on the free fall of the platform, the stand is provided with a contactless mechanism for setting the height (see Fig. 1 on the Enclosure). It consists of a transmitting selsyn connected by a flexible shaft to the shaft of an electric motor, a receiving selsyn placed in the frame of the mechanism, and a mechanism reductor. A setting indicator with a knob and contact, a sliding indicator with a contact, a height indicator scale,

Card 1/12

L 41032-65
ACCESSION NR: AP5008577

and   a stop relay are connected in the magnetic starter circuit of the electric
tackle. Orig. art. has: 1 diagram.

ASSOCIATION: none

SUBMITTED: 02Jan64   ENCL: 01   SUB CODE: ME

NO REF SOV: 000   OTHER: 000

Card 2/3

L 2645-66   EWT(d)/EWP(v)/EWP(k)/EWP(h)/EWP(1)   IJP(c)   GG/BB
ACCESSION NR: AP5025743   UR/0286/65/000/018/0091/0092
                                           681.142-523.8

AUTHOR: Vedeshnikov, V. A.; Volkov, A. F.; Zenkin, V. D.; Trapeznikov, V. A.;
Turkovskaya, T. A.

TITLE: A digital computer with programmed circuit control. Class 42, No. 174844

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 18, 1965, 91-92

TOPIC TAGS: digital computer, automatic computer programming, self adaptive control

ABSTRACT: This Author Certificate introduces a digital computer with pro-
grammed circuit monitoring. The unit contains a control counter, instruction memory,
instruction readout amplifier, instruction register, operation decoder, central con-
trol unit, control pulse amplifiers, arithmetic unit, working storage, and an input
output device. The installation is designed for automatically and accurately find-
ing elements that fail. The computer contains a microoperation zone decoder and a
pilot signal shaper which are connected together and to the readout amplifiers for
the instruction memory. The outputs from the pilot signal shaper are connected to
the central control unit, the local control unit, and the control signal amplifier

Card 1/3

L 2645-66
ACCESSION NR: AP5025743

O

unit. The computer also contains a microcontrol unit which is connected to the cen-
tral control unit and to the control signal amplifiers, and a device for recording
the point of failure, which is connected to the instruction memory readout ampli-
fiers. A modification of this computer is designed for transition from macroopera-
tion to microoperation conditions to improve the resolution of diagnostic tests.
The microcontrol unit in this computer contains the first gate for interpretation of
operating conditions. The inputs to this gate are connected respectively to the
unit for sampling commands from the instruction memory and to the flip-flop for
storage of operating conditions. The output from this flip-flop is connected to a
delay circuit through gates which are connected to the outputs from the microopera-
tion zone decoders which correspond to microoperations for setting the flip-flops of
the computer. The delay circuit is connected through a gating assembly to the out-
puts from the control signal amplifiers. The output from the delay circuit is con-
nected to the input of the instruction sampler. The second gate for interpretation
of operating instructions is connected to the input of the delay circuit. The in-
puts to this gate are connected respectively to the instruction sampler and to the
inverse output from the flip-flop for storage of operating conditions through the
gate for transition from macrocontrol to microcontrol conditions. The output from
the delay circuit is connected in parallel with the output from the first gate for

Card 2/3

L 2645-66

ACCESSION NR: AP5025743

2

interpretation of operating conditions. In a second modification of this computer, the number of points which can be monitored is increased by using an input register in the microoperation zone decoder. This register is connected to the decoder, and the outputs from the decoder are connected to the control points. In a third modification of this computer, indication of a point of failure is simplified by using an input register in the failure indicator with binary-digital code for the number of the non-operative element. This register is connected to decimal indicators through a decoder which converts the register code into decimal positional notation. A fourth modification of this computer is designed for automatically and accurately locating points of failure. The pilot signal shaper in this computer contains gates with inputs connected respectively to the microoperation zone decoder and to the readout amplifiers for the instruction memory. The outputs from these gates are connected to the elements to be monitored. [14]

ASSOCIATION: Institut avtomatiki i telemekhaniki (Institute of Automation and Tele-mechanics)

SUBMITTED: 27Jun64   ENCL: 00   SUB CODE: DP

                        OTHER: 000   ATD PRESS: 4124

NO REF SOV: 000

Card 3/3

L 65249-65   EWT(1)/T/EWA(h)   IJP(c)   AT
ACCESSION NR: AP5014551   UR/0181/65/007/006/1612/1614

AUTHOR: Volkov, A. F.

TITLE: Contribution to the theory of spin absorption by donor electrons in semi-conductors

SOURCE: Fizika tverdogo tela, v. 7, no. 6, 1965, 1612-1614

TOPIC TAGS: electron donor, spin resonance, hyperfine structure, absorption line

ABSTRACT: The author uses the model of P. Anderson (J. Phys. Soc. Japan v. 9, 316, 1954) to calculate the donor concentration at which the hyperfine structure of the absorption line vanishes. The calculation is based on the simple formula $\omega_e C_D^3 \approx \omega_0$ (ω_0 = frequency of hyperfine splitting, ω_e = frequency of electron exchange among the donors, C_D = donor atom concentration), which is obtained from the Anderson model. The results are compared with the experimental values of C_D published by K. A. Muller and J. Schneider (Phys. Rev. Lett. v. 4, 288, 1963). In addition, the author calculates the concentration dependence of the intensities of the absorption peaks, from which he derives the formula

$$S_1 : S_2 : S_3 = 1 : \frac{1}{2}\left(\frac{N}{C_D}\right) : \frac{1}{U}\left(\frac{N}{C_D}\right)^2$$

Card 1/2

L 65249-65
ACCESSION NR: AP5014551   3

(s = area under peak, N = donor concentration). The results are also compared with
the experimental data and are found to agree. Orig. art. has: 1 figure, 6 formu-
las, and 2 tables.

ASSOCIATION: Moskovskiy fiziko-tekhnicheskiy institut (Moscow Physicotechnical In-
stitute)

SUBMITTED: 10Sep64   ENCL: 00   SUB CODE: SS

NR REF SOV: 000   OTHER: 006

Card 2/2

SERGEYEV, P.V.; VOLKOV, A.F.

Distribution of I^{131}-labeled triiotrast in white rats. Farm. i toks. 27 no.4:468-470 Jl-Ag '64.

(MIRA 17:11)

1. Kafedra farmakologii (zav. - prof. V.V. Vasil'yeva) II Moskovskogo meditsinskogo instituta imeni Pirogova.

MAN'KOVSKIY, Grigoriy Il'ich; SHEVYAKOV, L.D., akademik, retsenzent;
    VOLKOV, A.F., otv.red.; VOLOVICH, M.Z., red.izd.; ALADOVA,
    Ye.I., tekhn.red.; SHKLYAR, S.Ya., tekhn.red.

[Special methods of shaft sinking] Spetsial'nye sposoby prokhodki
gornykh vyrabotok. Moskva, Ugletekhizdat, 1958. 453 p.
                        (Mining engineering)   (MIRA 12:2)

MALINOV, M.S., inzh. (g.Kolomna); VOLKOV, A.V., inzh. (g.Kolomna)

> Boiler-type preheaters for diesel locomotives. Elek.i
> tepl.tiaga no.7:12-15 Jl '60.   (MIRA 13:8)
>   (Diesel locomotives--Equipment and supplies)
>   (Air preheaters)

VOLKOV, A.V., inzh.

Stage resistance butt welding. Stroi.truboprov. 5 no.6:22-23 Je
'60.   (MIRA 13:7)
                    (Pipelines—Welding)

VOLKOV, A. G.

③

Polarographic study of coumarone and indene. A. G.
Pozdeeva and A. G. Volkov (Eastern Research Inst. Coal
Chemistry, Sverdlovsk). J. Appl. Chem. U.S.S.R. 25,
1123-8(1952)(Engl. translation).—See C.A. 47, 3716i.
H. L. H.

VOLKOV, A. G.

(3)

Effect of hydrocarbons of the coumarone and indene fractions on the polarographic wave height of coumarone and indene. A. G. Pozdeeva and A. G. Volkov (Eastern Sci. Research Coal Chem. Inst., Sverdlovsk)—Zhur. Priklad. Khim. 25, 1209-14(1952); cf. C.A. 46, 11171h.—The applicability of the polarographic method to the analysis of coumarone (I) and indene (II) in distn. fractions (fraction A 165-183° and fraction B 176-192°, resp.) was detd. in 3 steps: (1) the analysis of the pure substances in xylene solns. up to 12.3% of I and 67.4% of II was found to be within 5% for the first and 2.7 for the second; (2) the analysis of mixts. of the 2 pure substances (drops in 75% alc. added to BuNI in 75% dioxane) was found satisfactory up to a combined concn. of 12-14 millimoles/l. with a wave at 2.5-2.9 v.; the effect of impurities normally found in these fractions was detd. in several steps. Polymerization with 94% H_2SO_4 (8% by vol.) and steam distn. at 180° cf the I fraction showed the presence of styrene after the 1st treatment (half wave = −2.37 v.; cf. Stromberg and Pozdeeva, C.A. 44, 8267e); after the 2nd polymerization only the wave of I, II remained (half wave = −2.77 v.). Similar treatment of the II fraction resulted in a persistent wave; half wave = −2.5 v. (probably naphthalene, half wave = −2.51 v.), whereas the wave of II vanished after the 2nd polymerization. This led to the conclusion that the reducible unsaturates in fraction A were styrenes, I and II and those of the fraction B were I and II. Sulfonation with 103% H_2SO_4 and subsequent hydrolysis with steam at 240-60° led to the conclusion that reducible aromatic hydrocarbons in fraction A were polarographically inert, whereas those of fraction B were naphthalenes. Not enough of the paraffins of fraction A was obtained for analysis; those of fraction B were inert polarographically.   I. Bencowitz

VOLKOV, A.G.

Effect of hydrocarbons of the coumarone and indene fractions in the polarographic wave heights of coumarone and indene. A. G. Pozdeeva and A. G. Volkov. *J. Appl. Chem. U.S.S.R.* **25**, 1205–0(1952)(Engl. translation). See *C.A.* 48, 0808f.   H. L. H.

VOLKOV, Anatoliy Fedorovich; GOLUBKOVA, Ye.S., redaktor; GALAKTIONOVA, Ye.N., tekhnicheskiy redaktor.

[Building prestressed concrete bridges in Czechoslovakia] Opyt stroitel'stva predvaritel'no napriazhennykh zhelezobetonnykh mostov v Chekhoslovakii. Moskva, Nauchno-tekhn.izd-vo avtotransp.lit-ry, 1957. 60 p.   (MIRA 10:11)

(Czechoslovakia--Bridges, Concrete)

VOLKOV, A.F.

Manufacturing reinforced concrete pipes in outdoor yards during the winter months. Avt.dor. 21 no.9:6 S '58.   (MIRA 11:11)
(Pipe, Concrete)

VOLKOV, Anatoliy Fedorovich; ZUBKOVA, M.S., red.; GALAKTIONOVA, Ye.N.,
tekhn.red.

[Black gravel pavements] Pokrytiia iz chernykh graviinykh smesei.
Moskva, Nauchno-tekhn.izd-vo M-va avtomobil'nogo transp. i shosseinykh
dorog RSFSR, 1960. 15 p.   (MIRA 14:1)
                    (Pavements, Bituminous)

VOLKOV, A.F.

We moved 500,000 m^3 soil using one grader-elevator during the season. Avt.dor. 23 no.1:16-17 Ja '60. (MIRA 13:5)
(Road construction) (Earthmoving machinery)

YEFREMOV, Ivan Semenovich; VOLKOV, Andrey Fedotovich; ZAGAYNOV,
Nikolay Alekseyevich; NIKOL'SKIY, Igor' Konstantinovich;
TIKHOMIROV, Sergey Semenovich; CHERVINSKIY, Vladimir
Mikhaylovich; TCHLYANOVICH, D.K., red.

[Semiconductor power rectifiers in municipal transport] Po-
luprovodnikovye silovye preobrazovateli na gorodskom trans-
porte. Moskva, Izd-vo M-va kommun.khoz.RSFSR, 1963. 82 p.
(MIRA 17:9)

L 35885-66   EWT(l)   IJP(c)   AT

ACC NR: AP6024511   SOURCE CODE: UR/0386/66/004/002/0046/0048

AUTHOR: Vladimirov, V. V.; Volkov, A. F.

ORG: Moscow Physicotechnical Institute (Moskovskiy fiziko-tekhnicheskiy institut)

TITLE: Possibility of exciting cyclotron instability in semiconductors

TOPIC TAGS: semiconductor plasma, plasma instability, cyclotron resonance, dispersion equation, indium compound, antimonide

ABSTRACT: In view of recent interest in the excitation of microwave oscillations in solid-state plasma, the authors consider the possibility of exciting cyclotron instability in a two-component solid-state plasma by means of a current. The dispersion equation is written out in an approximation wherein the cyclotron instability is excited by resonance with the first harmonic, and the increment of the instability is calculated on this basis. The results are used for a numerical estimate of the excitation of hole cyclotron instability in InSb (electron-hole plasma). It is shown that in this case the required magnetic field is $H > 3 \times 10^3$ Oe, and for an intrinsic semiconductor the electron velocity should exceed the hole velocity by a factor larger than 5. This is realized in an electric field $\sim$150 v/cm. In doped semiconductors, the excitation can be effected in even weaker fields ($\sim$30 v/cm for p-InSb). It is not excluded that the microwave radiation observed in InSb by R. D. Larrabee (Bull.

Card 1/2

L 35885-66

ACC NR: AP6024511

Amer. Phys. Soc. v. 9, 258, 1964) is due to hole cyclotron instability. The authors
thank B. B. Kadomtsev and D. A. Frank-Kamenetskiy for a discussion of the work.
Orig. art. has: 8 formulas.   [02]

SUB CODE: 20/   SUBM DATE: 10May66/   OTH REF: 005/   ATD PRESS: 5037

Card   2/2 ullr

ACC NR: AP7002991   (A)   SOURCE CODE: UR/0413/66/000/024/0089/0090

INVENTORS: Al'tshul', S. D.; Afinogenov, L. P.; Buyanov, B. B.; Volkov, A. F.:
Gil'man, G. I.; Domanitskiy, S. M.; Pavlov, Ye. N.; Rog, G. V.; Trapeznikov, V. A.

ORG: none

TITLE: Controlling logic machine. Class 42, No. 189629

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 24, 1966, 89-90

TOPIC TAGS: logic circuit, computer logic

ABSTRACT: This Author Certificate presents a controlling logic machine containing
input and output devices, a storage device, a control device, a logic device
consisting of "NOT", "AND", and "OR" circuits, input logic units, triggers, and delay
lines (see Fig. 1). To achieve group processing of information between the elements
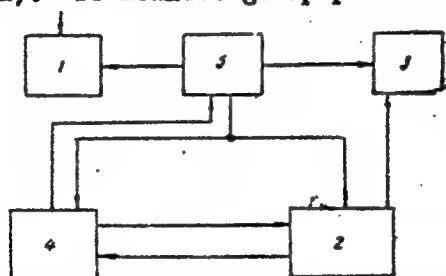
Fig. 1. 1 - input device;
2 - logic device; 3 - output
device; 4 - storage device;
5 - control device

Card 1/2

UDC: 681.142

ACC NR: AP7002991

of the selected group for reduction of the computation program, the outputs of the
input logic units are connected to "OR" circuits. The output of the first "OR"
circuit is connected through a first gate (also connected to the first output of the
control device) to the input of the result storage trigger. The output of the second
"OR" circuit is connected through a second gate (also connected to the second output
of the control device) to the input of the result storage trigger, through an inverter
and third gate to the input of the result storage trigger, and through a fourth gate
and through a delay line and fifth gate to the input of the result storage register.
The second inputs of the third, fourth, and fifth gates are connected respectively to
the third output of the control device, to the output of the result storage trigger,
and to the fourth output of the control device. The second input of the result stor-
age trigger is connected to the fifth output of the control device. The output of
the result storage trigger is connected through a sixth gate (whose second input is
connected to the sixth output of the control device) to the result storage register
and through a seventh gate (whose other input is connected to the controlling input
of the input logic unit) to the other input of the input logic unit. Orig. art.
has: 1 diagram.

SUB CODE: 09/.   SUBM DATE: 11Feb65

Card 2/2

ACC NR: AP6036955   (A, N)   SOURCE CODE: UR/0181/66/008/011/3187/3195

AUTHOR: Volkov, A. F.

ORG: Moscow Physicotechnical Institute (Moskovskiy fiziko-tekhnicheskiy institut)

TITLE: Waves in semiconductors with a negative differential resistance

SOURCE: Fizika tverdogo tela, v. 8, no. 11, 1966, 3187-3195

TOPIC TAGS: semiconductor theory, shock wave, standing wave

ABSTRACT: The paper discusses waves which may propagate in semiconductors with a
negative differential resistance. The shape and parameters of steady waves of finite
amplitude which arise as a result of the development of instability are determined,
and it is shown that an isolated travelling wave (domain) is produced in such systems.
The shape and velocity of such a wave are calculated by means of a nonlinear treat-
ment. It is also shown that shock waves with an oscillating front can be excited in
the media under consideration. The nonlinear analysis of the problem was undertaken
by V. L. Bonch-Bruyevich, whom the author thanks for affording him the opportunity to
familiarize himself with his work prior to its publication. The author is also sin-
cerely greateful to A. A. Vedenov for supervising the work and to D. A. Frank-
Kamenetskiy for discussing the results. Orig. art. has: 5 figures and 13 formulas.

SUB CODE: 20/ SUBM DATE: 25Feb66/ ORIG REF: 005/ OTH REF: 006

Card   1/1

U S S R .

Polarographic analysis of the coumarone and indene fractions of crude benzene (coal tar fraction) A. G. Pochkin and A. G. Yakov ... U.S.S.R. 26, 1953-1961 (1 ...) ...... H. L. H.

VOLKOV, A. G.

Polarographic analyses of the coumarone and indene fractions of crude benzene (coal-tar fractions). A. G. Pozdeeva and A. G. Volkov (Eastern Sci. Research Inst. Coal Chem., Sverdlovsk). *Zhur. Priklad. Khim.* 26, 1067–73(1953); cf. *C.A.* 47, 3716i.—Styrene (I) + naphthalene (II) and coumarone (III) + indene (IV) present in alkali-washed (to remove phenols) fractions (b. 150–175°) of coal tar were detd. polarographically with a 0.1M soln. of Bu₄NI in 75% dioxane as the electrolytic solvent. The individual compds.

in these pairs were not detd. directly as their half-wave potentials are too close for ready differentiation. To det. if, I was first removed in a separatory funnel by 85% H₂SO₄ (or anhyd. AlCl₃), and subjecting the dried steam distillate to polarographic analysis. I was obtained by difference. III and IV were detd. in like fashion by analyzing the soln. from which III had been removed through condensation with BzH in alk. EtOH. Analyses of synthetic mixt. of these 4 compds. in xylene showed the method accurate within ±1%. Indene fractions (b. 175–185°) were analyzed as above except that I was not present. Analyses included both fractions taken from 3 eastern coke-chem. works. Since polymers prepd. from IV by the action of AlCl₃, heat, or H₂SO₄ were found to be either inert to the dropping Hg electrode or to give insignificant values, the basic method was adapted to study the unchanged IV/ time relations for such actions. Polymerization resulting from long-time room-temp. storage could not be studied directly as the resultant polymers yield an interfering polarogram. Action of heat (185°) on pure IV caused 40% polymerization in 4–5 hrs. and approx. 80% in 16 hrs. Treating a xylene soln. of IV with 4% its vol. of 72% H₂SO₄ caused 25% polymerization in 15 min. but did not change with further time. Similarly, 66% by vol. of 93% H₂SO₄ converted 97.83% of IV in 15 min. and 99.64% in 15 min. Action of 2% (wt.) polymerized all of the IV contained in a xylene soln. within 15 min. This work shows that important losses in the production of indene can occur during: (1) the 72% H₂SO₄ wash procedure and (2) rectification. The latter can be minimized by operating under reduced pressure.

John A. Krynitsky

IBIKUS, U.Yu.; VOLKOV, A.G.

Apparatus for determining the initial stage of the spontaneous
combustion of coal in a caved-in mine area. Nauch. trudy
KNIUI no. 11:152-155 '62.   (MIRA 17:7)

VOLKOV, A.G.

Automation of boilers operating on gas obtained during the
degasification of a mine. Nauch. trudy KNIUI no. 11:242-253
'62.   (MIRA 17:7)

IBIKUS, U.Yu.; VOLKOV, A.G.

Investigating the consumption characteristics of throttle
control valves. Nauch. trudy KNIUI no.15:316-325 '64.
(MIRA 18:8)

VCLKOV, Aleksandr Gavrilovich; IVANOV, A.K., inzh., nauchnyy red.;
ROTENBERG, A.S., red. izd-va; PUL'KINA, Ye.A., tekhn. red.

[Planning organizational and technical measures in construc-
tion]Planirovanie organizatsionno-tekhnicheskikh meropriiatii
v stroitel'stve. Leningrad, Gosstroiizdat, 1962. 93 p.
(MIRA 15:10)
(Construction industry)

BESPALOV, I.V., inzh.; VOLKOV, A.G., inzh.; PEYSIN, D.M., inzh.; PO-
RADNYA, A.I., doktor tekhn. nauk, prof., retsenzent; KHIMUNIN,
S.D., kand. tekhn. nauk, nauchnyy red.; REYZ, M.B., red. izd-va;
PUL'KINA, Ye.A., tekhn. red.

[Quality control of building operations] Kontrol' kachestva
stroitel'nykh rabot. Leningrad, Gos. izd-vo lit-ry po stroit.,
arkhit. i stroit. materialam, 1961. 205 p.   (MIRA 14:8)
               (Construction industry—Quality control)

SAL'NIKOV, V. V.; VOLKOV, A. G.

Production of α-phenylethyl alcohol from the styrene fraction of crude benzol. Zhur. prikl. khim. 33 no.9:2118-2121 S '60.
(MIRA 13:10)

1. Ural'skiy lesotekhnicheskiy i Vostochnyy uglekhimicheskiy instituty.
(Phenethyl alcohol)

PALEY, A.B., starshiy prepodavatel'; VOLKOV, A.I.

New universal automatic device for weft straightening in fabrics. Tekst. prom. 25 no.3:59-60 Mr '65.   (MIRA 18:5)

1. Kafedra teoreticheskoy fiziki Ivanovskogo pedagogicheskogo instituta (for Paley). 2. Starshiy inzh. laboratorii elek-troprivoda i avtomatiki Spetsial'nogo konstruktorskogo byuro po proyektirovaniyu krasil'no-otdelochnogo oborudovaniya Verkhne-Volzhskogo Soveta narodnogo khozyaystva (for Volkov).

KONSAREV, A.I.; VOLKCV, A.I.; PRONIN, A.T.; PLATONOV, V.S.

Modification of the loading mechanism for an IM-LE machine.
Zav. lab. 31 no.8:1025 '65.   (MIRA 18:9)

VOLKOV, A.I., dotsent; MARCHENKO, P.A., inzh.

Connection to a plumb bob alignment by means of an isoceles
triangle. Izv. vys. uchsb. zav.; gor. zhur. no. 11:93-100
'60.
                                            (MIRA 13:12)

1. Tomskiy ordena Trudovogo Krasnogo Znameni politekhnicheskiy
institut imeni S.M. Kirova. Rekomendovana kafedroy
marksheyderskogo dela Tomskogo politekhnicheskogo instituta.
                    (Mine surveying)

VOLKOV, A.I., dotsent, kand. tekhn. nauk; MARCHENKO, P.A., inzh.

Graphic method of compiling mine surveying maps in projection on
an inclined plane. Nauch. dokl. vys. shkoly; gor. delo no.1:83-85
'59.   (MIRA 12:5)

1. Predstavlena kafedrami Marksheyderskogo dela i geodezii Tomskogo
politekhnicheskgo instituta.
                         (Mine maps)

ANTONOVA, Lyudmila Aleksandrovna, VOLKOV, Aleksandr Ivanovich, SINITSYN, N.A.,
     red.; KOSAREVA, Ye.N., tekhn.red.

     [Practices in introducing amendments to collective farm statutes]
     Praktika vneseniia izmenenii v ustavy kolkhozov. Moskva, Gos. izd-vo
     iurid. lit-ry, 1958. 56 p.   (MIRA 11:9)
               (Collective farms)

VOLKOV, Aleksandr Ivanovich; KRASNOV, N.A., red.

[Rights and duties of the collective farms reproduction
intensification; based on the materials of the Plenum of
the Central Committee of the CPSU held in February 1964]
O pravakh i obiazannostiakh kolkhozov po intensifikatsii
proizvodstva; po materialam Plenuma TsK KPSS, sostoiav-
shegosia v fevrale 1964 goda. Moskva, IUridicheskaia li-
teratura, 1964. 61 p.   (MIRA 17:11)

VOLKOV, Aleksandr Ivanovich; SHTAN'KO, Nikolay Ivanovich; GOLUBKOVA,
        V.A., red.; MARAKASOVA, L.P., tekhn. red.

    [Branch of a Siberian cedar] Vetv' sibirskogo kedra. Mo-
    skva, Sovetskaia Rossiia, 1962. 359 p.   (MIRA 17:3)

VOLKOV, ALEKSANDR IVANOVICH

N/5
722.101
.V91

PRAVOVOYE POLOZHENIYE KOLKHOZNYKH FONDOV (THE LEGAL STATUS OF KOLKHOZ FUNDS) MOSKVA, GOSYURIZDAT, 1955.

61 P. (POPULYARNAYA YURIDICHESKAYA LITERATURA)

BIBLIOGRAPHICAL FOOTNOTES.

VOLKOV, A. I.

VOLKOV, A. I. — "Technical Economic Substantiation of the Permissible Divergence of Meeting Stopes in Mining Operations." *(Dissertations for Degrees in Science and Engineering Defended at USSR Higher Educational Institutions) Min Higher Education, Tomsk Order of Labor Red Banner Polytechnic Inst imeni S. M. Kirov, Tomsk, 1955

SO: Knizhnaya Letopis' No. 31, 3ᴿ July 1955.

*For the Degree of Candidate in Technical Sciences.

VOLKOV, A.I.

CA

The influence of the composition of carbon steel castings on their mechanical properties. Yu. A. Nekhendzi and A. I. Volkov. *Metallurg.* 9, No. 5, 17–33(1934).— An examn. of data in one plant shows that the relation between % compn. and tensile strength is given by the formula $R = 25 + 63C + 10Si + 8Mn$.   H. W. R.

VOLKOV, A.I.; PROTASENYA, M.P.

Citrated mare's blood in the control of sterility. Veterinariia
41 no.6:93 Je '64.

(MIRA 18:6)

1. Glavnyy veterinarnyy vrach Mogilevskogo proizvodstvennogo
upravleniya (for Volkov). 2. Zaveduyushchiy veterinarnoy
laboratoriyey Mogilevskogo proizvodstvennogo upravleniya (for
Protasenya).

VOLKOV, A.I.

The new TG' and TGS mine theodolites. Izv. TPI 112:46-52 '63.
(MIRA 18:9)

L 9684-66   EWT(m)/EWA(d)/EWP(t)/EWP(z)/EWP(b)   IJP(c)   JD

ACC NR: AP5027473

SUB CODE: UR/0032/65/031/011/1416/1416

AUTHOR: Kosarev, A. I.; Kuznetsov, A. N.; Pronin, A. T.; Volkov, A. I.

ORG: none

TITLE: Clamping chuck for mechanical tests of thin-walled tubular specimens

SOURCE: Zavodskaya laboratoriya, v. 31, no. 11, 1965, 1416

TOPIC TAGS: clamping chuck, metal test, test facility, high temperature strength, metal tube

ABSTRACT: High-temperature strength tests of thin-walled tubular specimens involve difficulties in attaching the specimens to the test machines. These difficulties could previously be circumvented only by testing extra-long tubular specimens or by welding special mounts onto the specimens. To obviate these difficulties, the authors designed a self-centering chuck (Fig. 1) which makes it possible to test tubular specimens of any length. The chuck consists of housing 1, three cone-shaped bushings 2 with inclination angle of 4.5-5° and threaded inner surface, and connecting sleeve 3 serving to tighten the hold on the specimen and connect the chuck to the testing-machine clamp. To enhance the rigidity of specimen 4, plug 5 is inserted over the butt end of the specimen. Clamping chucks of this design have been used by the authors in the tests of tubular specimens of VTI-1 titanium alloy at the temperature
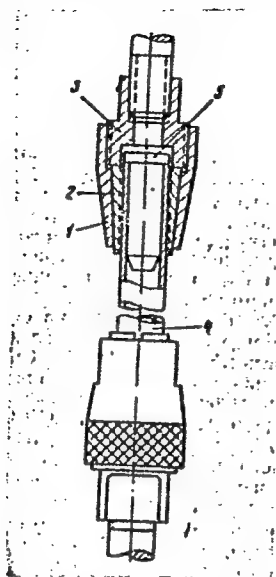
Card   1/3

L 9684-66

ACC NR: AP5027473

Fig. 1   Clamping chuck

Card   2/3

L 9684-66

ACC NR: AP5027473   3

of 450°C as well as of thin-walled aluminum-alloy tubes with diameter of 16 mm and
less, produced by cold pressing at normal and elevated temperatures. The parts of
clamping chucks for the testing of aluminum-alloy tubes may be made of 40Kh or
50 steels, and the bushings -- of tool steels, while the parts of chucks for testing
tubes of heat-resistant materials should best be made of EI437B or EI929 chrome-
nickel alloys. For tubes with similar outside diameters the same clamping chuck may
be used on merely replacing the bushings. Orig. art. has: 1 figure.

SUB CODE: 11, 13/ SUBM DATE: none/ ORIG REF: 000/ OTH REF: 000

Card 3/3

PIKHTOVNIKOV, R.V., doktor tekhn. nauk; VOLKOV, A.I.

Explosive forming of sheet metal. Mashinostroitel' no.11:22-25
N '64
(MIRA 18:2)

VOLKOV, Aleksandr Ivanovich; YEMEL'YANOVA, V.G., red.; TIMOFEYEVA, N.V.,
tekhn. red.

[The rights and duties of collective farms in regard to the
development oftheir communal economy; based on materials of the
plenary session of the Central Committee of the CPSU in January
1961] O pravakh i obiazannostiakh kolkhozov po rasvitiu obshche-
stvennogo proizvodstva; po materialam ianvarskogo (1961 g.) Plemma
TsK KPSS. Moskva, Gos. izd-vo iurid. lit-ry, 1961. 63 p.

(MIRA 14:9)

(Collective farms)

VOLKOV, A.I., dotsent; MARCHENKO, P.A., assistant

Instruments for making projections on an inclined plane.
Izv.vys.ucheb.zav.; gor.zhur. no.7:31-34 '60.
(MIRA 13:7)

1. Tomskiy ordena Trudovogo Krasnogo Znameni politekhnicheskiy
institut imeni S.M.Kirova. Rekomendovana nauchnym seminarom
kafedr geodezii i marksheyderskogo dela.
(Mine surveying--Equipment and supplies)

VOLKOV, A.I.

Reclaiming the desert soils of the ancient delta of the Syr-Darya.
Izv.AN Kazakh.SSR.Ser.bot.i pochv. no.3:3-17 '58. (MIRA 13:5)
(Syr-Darya Valley--Agriculture)

RUDKEVICH, M.Ya.; VOLKOV, A.I.

Nature of disjunctive dislocations in Tertiary sediments of the
Kazym area in the Ob' Valley. Sov. geol. 2 no.5:149-152 My '59.
(MIRA 12:8)

1.Tyumenskoye territorial'noye geologicheskoye upravleniye.
(Kazym Valley--Geology)

VOLKOV, A.I., kand.tekhn.nauk

Determining the indices for the degree of investigation of a
deposit and errors of analogy by the method of second-order
differences. Izv.vys.ucheb.zav.; gor.zhur. no.6:9-13 '59.
(MIRA 13:4)

1. Tomskiy ordena Trudovogo Krasnogo Znameni politekhnicheskiy
institut imeni S.M.Kirova. Rekomendovana kafedroy markshey-
derskogo dela i geodezii.
(Ore deposits)